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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,893	04/25/2001	Charles E. Wheatley III	QCPA453B1C1	6708
23696	7590	06/12/2006	EXAMINER	
QUALCOMM, INC			RYMAN, DANIEL J	
5775 MOREHOUSE DR.			ART UNIT	
SAN DIEGO, CA 92121			PAPER NUMBER	

2616

DATE MAILED: 06/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/841,893	Applicant(s) WHEATLEY ET AL.	
	Examiner Daniel J. Ryman	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2006.  
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-16, 18-20, 31, 32, 34, 36-39, 50, 51, 53 and 55-58 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☒ Claim(s) 11-16, 18-20, 32, 34, 36-39, 51, 53 and 55-58 is/are allowed.  
 6) ☒ Claim(s) 1-6, 8-10, 31 and 50 is/are rejected.  
 7) ☒ Claim(s) 11-16, 18-20, 31, 50, 51, 53 and 55-58 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. The indicated allowability of claim 1-6 and 8-10 is withdrawn in view of a rejection under 35 USC § 101. The new rejections follow.
2. Applicant's arguments with respect to claims 31 and 50 have been considered but are not persuasive. On page 15 of the Response, Applicant asserts that paragraph 1111 discloses estimating a round trip delay. While this may be true, paragraph 1111 does not disclose estimating a round trip delay between the mobile and two base stations other than the base station being synchronized. As such, Examiner maintains the rejection of claims 31 and 50 under 35 USC § 112.

### ***Claim Objections***

3. Claim 11 is objected to because of the following informalities: in line 1 “apparatus” should be “system” since, as currently written, claim 11 literally requires a single apparatus to comprise two separate base stations; in line 3, “station configured to” should be “station to”; in line 7, “station configured to” should be “station to”; and in line 8, “noting” should be “note”. Appropriate correction is required.
4. Claim 12 is objected to because of the following informalities: in line 1 “apparatus” should be “system” and, in line 2, “station is further configured to receive” should be “station further receives”. Appropriate correction is required.
5. Claim 13 is objected to because of the following informalities: in line 1 “apparatus” should be “system” and, in lines 1-2, “station is further configured to send” should be “station further sends”. Appropriate correction is required.

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6. Claim 14 is objected to because of the following informalities: in line 1 “apparatus” should be “system” and, in lines 1-2, “station is further configured to send” should be “station further sends”. Appropriate correction is required.

7. Claim 15 is objected to because of the following informalities: in line 1 “apparatus” should be “system”; in lines 1-2, “station is further configured to:” should be “station further:”; in line 3, “receive” should be “receives”; and, in line 4, “select” should be “selects”. Appropriate correction is required.

8. Claim 16 is objected to because of the following informalities: in line 1 “apparatus” should be “system” and, in lines 1-2, “station is configured to select” should be “station selects”. Appropriate correction is required.

9. Claim 18 is objected to because of the following informalities: in line 1 “apparatus” should be “system” and, in lines 1-2, “station is configured to select” should be “station selects”. Appropriate correction is required.

10. Claim 19 is objected to because of the following informalities: in line 1 “apparatus” should be “system” and, in lines 1-2, “station is configured to select” should be “station selects”. Appropriate correction is required.

11. Claim 20 is objected to because of the following informalities: in line 1 “apparatus” should be “system” and, in lines 1-2, “station is configured to select” should be “station selects”. Appropriate correction is required.

12. Claim 31 is objected to because of the following informalities: in line 5, “mobile station” should be “mobile station and processing these signals” since the estimation in step (ii) is not a signal received at the base station. Further, it is unclear how step (iii) further limits the claim.

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Step (iii) requires that the signals be received in accordance with the provided information and the estimated distance. First, it is unclear how a signal is received in accordance with the distance. Second, the claim has already specified that the signals received by the base station include the provided information and the estimated distance. Examiner requests that Applicant clarify this language. Appropriate correction is required.

13. Claim 50 is objected to because of the following informalities: in lines 4-5 “processor being configured to execute” should be “processor to execute” and, in line 15, “configured to receive” should be “to receive”. Appropriate correction is required.

14. Claim 51 is objected to because of the following informalities: in lines 4-5 “processor being configured to execute” should be “processor to execute” and, in line 15, “configured to receive” should be “to receive”. Appropriate correction is required.

15. Claim 53 is objected to because of the following informalities: in line 7 “configured to receive” should be “to receive”; in line 11, “station being configured to obtain” should be “station obtains”; and in line 12, “transmitter being configured to transmit” should be “transmitter transmits”. Appropriate correction is required.

16. Claim 55 is objected to because of the following informalities: in line 8 “configured to receive” should be “to receive”. Appropriate correction is required.

17. Claim 56 is objected to because of the following informalities: in line 14 “station is configured to” should be “station to”. Appropriate correction is required.

18. Claim 57 is objected to as depending upon a rejected claim, namely claim 54. Appropriate correction is required.

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19. Claim 58 is objected to because it refers to claim 54, which has been canceled.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

20. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

21. Claims 31 and 50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 31 and 50 require estimating the distance between the base station and the mobile unit by determining the round trip time between the mobile unit and two other base stations (first and second base station). The specification does not list using the round trip times between the mobile and two additional base stations as a way to determine the distance between the mobile and the base station (§ 1110). Since this application is a continuation application, these claims are deemed to be new matter, even though the claims were part of this application's originally filed set of claims.

22. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

23. Claims 31 and 50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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24. Claim 31 requires “adjusting timing of the base station in accordance with the received signals”; however, it is unclear what constitutes “the received signals.” Although claim 31 includes three things (namely, (i), (ii) and (iii)), which are received at the base station, these three things are not all signals. For instance, (ii) is an estimation of the distance to the mobile station. The claim does not describe how this estimation is derived and thus does not require calculating the estimation using signals from the mobile station. Further, (iii) includes signals received “in accordance with the provided information and the estimated distance.” It is unclear how a signal is transmitted from the mobile station “in accordance with the provided information and the estimated distance” when the distance is estimated at the base station, not the mobile. In view of the foregoing, Examiner cannot ascertain which signals are used to adjust the timing of the base station. Specifically, Examiner is unsure as to whether the estimated distance is used to adjust the timing of the base station since the estimated distance is not a received signal per se since it is determined at the base station. In addition, Examiner is unsure as to what signals “received at the base station” which were “transmitted from the mobile station in accordance with the provided information and the estimated distance” are included in the timing adjustment. Examiner requests that Applicant clarify the claim.

25. Claim 50 requires the controller to “adjust timing of the base station in accordance with received signals”; however, it is unclear what constitutes “received signals” since the claim never defines this term. Simply, is the estimated distance a “received signal”? What about signals received from other mobiles or the BSC? Applicant should clearly define the term “received signals” in order to clarify which signals are used to adjust the timing of the base station.

***Claim Rejections - 35 USC § 101***

26. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

27. Claims 1-6 and 8-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In order for a method to be statutory, the method must have a practical application. A practical application can be identified in one of the following ways: (1) the claimed invention “transforms” an article or physical object to a different state or thing and (2) the claimed invention otherwise produces a useful, concrete, and tangible result. Here, the method merely performs a calculation to determine a timing correction value. There is no “transformation” of an article or physical object since the calculation is not tangible. In addition, there is no useful, concrete, and tangible result since the claims do not require that the second base station use the timing correction value to synchronize the second base station with the first base station. Simply, in the claims, the timing correction value is calculated, but not used. In order to be statutory, the claims should require that the use of the timing correction value by the second base station to synchronize the second base station with the first base station.

***Allowable Subject Matter***

28. Claims 11-16, 18-20, 32, 34, 36-39, 51, 53, and 55-57 are allowed.

29. Regarding claims 11-16 and 18-20, the prior art does not disclose or fairly suggest having a base station calculate a timing correction value based upon an estimate of a delay between a mobile unit and the base station, the time of reception by the base station of a signal sent from the mobile unit, and a measured round trip delay interval between the mobile unit and another base station.



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30. Regarding claims 32 and 51, the prior art does not disclose or fairly suggest adjusting the timing of the base station in accordance with an actual and an estimated PN offset of the mobile station where the base station has its transmitter disabled, such that the base station only receives signals, and does not transmit signals, until it has acquired timing.

31. Regarding claims 34, 36-39, 53, and 55-57, the prior art does not disclose of fairly suggest adjusting the timing of a base station in accordance with signals received from a mobile unit, where the base station has its transmitter disabled, such that the base station only receives signals, and does not transmit signals, until it has acquired timing.


### *Conclusion*

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Abreu et al. (USPN 6,014,376) see entire document which pertains to using a mobile station to synchronize a base station to a reference base station; however, Abreu requires the slave base station to transmit to the mobile station during the synchronization process. Dupuy et al. (USPN 6,072,847) see entire document which pertains to using a mobile station to synchronize a base station to a reference base station; however, Dupuy requires the slave base station to transmit to the mobile station during the synchronization process. Ariyoshi et al. (USPN 5,930,244) see col. 3, lines 4-15 which discloses comparing a received PN offset to a reference PN offset for purposes of synchronization. Gudmundson et al. (USPN 5,295,152) see col. 2, lines 41-45 which discloses increasing the power level of a transmission until the receiving unit replies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 Daniel J. Ryman  
Examiner  
Art Unit 2616

  
HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600